

App. No. 09/990,097
Amendment dated Apr. 18, 2006
Reply to Office Action of Dec. 19, 2005

Docket No. 01-6145

REMARKS/ARGUMENTS

The above amendment and the following remarks are in reply to the non-final Office action of 12/19/2005 in the instant application. In light of this reply, reconsideration and further examination of this application are respectfully requested.

Sixty-three claims were pending in this application. In response to a previous, timely traversed Restriction/Election requirement, 39 claims (1-5, 7, 10-16, 18, 21-40, 58-60, 62 and 63) were provisionally elected for prosecution in this application, and 24 claims (6, 8, 9, 17, 19, 20, 41-57, and 61) were provisionally withdrawn as directed to non-elected species.

In the above amendment, seventeen claims (41 – 57) were cancelled without prejudice. Accordingly, forty-six claims (1-40 and 58-63) remain pending for reconsideration and further examination.

In Section 3 of the Office action, the Examiner rejected claims 58 and 60 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,761,298 to Davis et al., stating, in pertinent part,

“Regarding Claim 58, Davis discloses ... wherein the ratio of an amplitude of the output signal to an amplitude of acoustic signals received at the opening of the secondary boom is a function of the position of the secondary boom” (Emphasis added.)

In light of the remarks that follow, this rejection is respectfully traversed.

Davis teaches a communications headset with a receiver and a microphone boom having relative positions that are universally adjustable by means of rotating, flexing and pivoting joints to enable the headset to be worn by a wide variety of users having different ear shapes and sizes. However, it should be understood that in Davis, as in all other communications headsets of the prior art, the amplitude of the electrical output signal of the microphone 102 to the amplitude of the acoustic signals received at the opening at the distal end 21 of the microphone boom 17 is fixed, i.e., constant, irrespective of the position of the microphone boom, and this is true whether the microphone is located at the distal end of the boom, or at the proximal end of a “voice tube” boom, as in Davis.

The result of this is that the output signal of the headset will change, typically in an undesirable way, whenever the position of the acoustic sensing point, i.e., the opening at the end of the microphone boom, is moved relative to the desired acoustic source, e.g., the user's mouth. But the apparatus of the present invention overcomes this and other problems of the prior art by the provision of mechanisms that change the ratio of the amplitude of the output signal to the

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amplitude of sound pressure at the acoustic sensing point in response to the position of the microphone boom, thereby changing the output signal of the apparatus in a desirable way in response to changes in position of the microphone boom.

In particular, independent claim 58 recites the limitation, "wherein a ratio of an amplitude of the output signal to an amplitude of acoustic signals received at the opening of the secondary boom is a function of the position of the secondary boom." (Emphasis added.) Since, as above, Davis teaches just the opposite, that the ratio is fixed, regardless of the position of the boom, Davis neither teaches or even suggests this limitation, and accordingly, it is respectfully submitted that claim 58, as well as the claims dependent from it, viz., claims 59 – 62, are allowable over Davis et al.

Further, it is respectfully submitted that claim 58 now constitutes an allowable generic or linking claim, and pursuant to MPEP 809.04, that the claim dependent from it and previously withdrawn from consideration (claim 61) should be rejoined to the application, examined for patentability under 37 CFR 1.104 and held allowable.

In Section 6 of the Office action, the Examiner rejected claims 58, 59 and 60 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,020,297 to Brodie, stating, in pertinent part,

"Regarding Claim 58, Brodie discloses ... *wherein the ratio of an amplitude of the output signal to an amplitude of acoustic signals received at the opening of the secondary boom is a function of the position of the secondary boom*." (Emphasis added.)

In light of the remarks above with respect to Davis et al. and the remarks that follow, this rejection is respectfully traversed.

Brodie, like Davis et al. above, describes a communications headset 10 incorporating an earpiece 31 and a microphone boom 93 comprising a microphone 18 located at the proximal end of a two-piece, axially slidable and rotatable voice tube 19. Of importance, it will be noted that in Brodie, as in Davis et al. above, the amplitude of the electrical output signal of the microphone 18 to the amplitude of the acoustic signals received at the sensing point, i.e., the opening at the distal end 23 of the microphone boom 19 is fixed, i.e., constant, regardless of the position of the microphone boom, and accordingly, the output signal of the headset will change undesirably whenever the position of the acoustic sensing point is moved relative to the desired acoustic source.

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Thus, Brodie, like Davis et al. above, fails to teach or suggest the limitation of claim 58, "wherein a ratio of an amplitude of the output signal to an amplitude of acoustic signals received at the opening of the secondary boom is a function of the position of the secondary boom." Accordingly, it is respectfully submitted that 1) claim 58, as well as the claims dependent from it, viz., claims 59 – 62, are allowable over Brodie, and 2) that claim 58 now constitutes an allowable generic or linking claim, and pursuant to MPEP 809.04, that the claim dependent from it and previously withdrawn from consideration (claim 61) should be rejoined to the application, examined for patentability under 37 CFR 1.104 and held allowable.

In Section 11 of the Office action, the Examiner rejected claims 1, 4, 7, 10-16, 18, 21, 23-24, 26, 39-40, and 62-63 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,761,298 to Davis et al., above, in view of U.S. Patent No. 5,359,157 to Liu, stating, in pertinent part,

"12. Regarding claim 1, Davis discloses ...*a controller (Figs. 1 and 3A-3B), coupled to the boom, for changing a ratio of an amplitude of the output signal to an amplitude of sound pressure at the acoustic sensing point in response to the position of the boom.*

19. Claim 14 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1.

23. Claim 21 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1 (Figs. 1 and 3A-3B).

27. Claim 39 is essentially similar to Claim 1 and is rejected for the reasons stated above apropos to Claim 1" (Emphasis added.)

In light of the above remarks regarding the primary references Davis et al. and Brodie, and further in light of the remarks that follow, this rejection is respectfully traversed.

Initially, it is noted that Liu fails to supply any of the deficiencies in teaching of the primary references of Davis et al. and Brodie with respect to independent claim 58 discussed above. In particular, and contrary to the Examiner's assertion above, Davis teaches the amplitude of the electrical output signal of the microphone to the amplitude of the acoustic signals received at the acoustic sensing point, i.e., the opening at the distal end of the microphone boom, is fixed, i.e., constant, regardless of the position of the microphone boom, and accordingly, teaches directly away from the limitations of independent claims 1, 14, 21 and 39 which respectively recite,

Claim 11 – *a controller, coupled to the boom, for changing a ratio of an amplitude of the output signal to an amplitude of sound pressure at the acoustic sensing point in response to the position of the boom;*

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Claim 14 – *sensitivity control means, coupled to the boom, for changing a ratio of an amplitude of the output signal to an amplitude of sound pressure at the acoustic sensing point in response to the position of the boom;*

Claim 21 – *a controller circuit, coupled to the boom, adapted to change a ratio of an amplitude of the output signal to an amplitude of the acoustic signal at the diaphragm in response to the position of the boom; and,*

Claim 39 – *a receive controller circuit, coupled to the boom, adapted to change a ratio of an amplitude of the acoustic output signal at the receiver to an amplitude of the electrical input signal at the receiver in response to the position of the boom.*

A thorough review of both Davis et al and Liu reveals that neither reference teaches or suggests the foregoing respective limitations, and further, that Liu does not even include a “receiver” element, much less a “receive controller circuit” for changing the ratio of the amplitude of its output signal to the amplitude of its input signal. Accordingly, it is respectfully submitted that:

1) independent claims 1, 14, 21 and 39, as well as the claims respectively dependent from them, viz., claims 2 – 13 and 63, 15 – 20, 22 – 38, and 40, are allowable over both Davis et al. and Liu, whether taken singly or in combination; and,

2) independent claims 1, 14, 21 and 39 now constitute allowable generic or linking claims, and pursuant to MPEP 809.04, that the claims respectively dependent from them and previously withdrawn from consideration (6, 8, 9, 17, 19, 20 and 61) should be rejoined to the application, examined for patentability under 37 CFR 1.104 and held allowable.

In Section 31 of the Office action, the Examiner rejected claims 1, 4, 7, 10-16, 18, 21, 23-24, 26, 30-34, 36, 39-40, and 62-63 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,761,298 to Davis et al. [*sic* – probably S/B U.S. Patent No. 4,020,297 to Brodie] in view of U.S. Patent No. 5,359,157 to Liu, repeating substantially verbatim the same rejections above of claims 1, 4, 7, 10-16, 18, 21, 23-24, 26, 36, 39-40, and 62-63 under 35 U.S.C. 103(a) in light of Davis et al. and Liu, and adding to these a rejection of claims 30 – 34.

However, a thorough review of Brodie reveals that, for the reasons discussed above with respect to Davis et al. and Liu, it fails to teach or even suggest the respective limitations discussed above as regards independent claims 1, 14, 21 and 39, and in fact, teaches straight away from them. Accordingly, it is respectfully submitted that:

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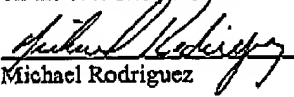
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1) independent claims 1, 14, 21 and 39, as well as the claims respectively dependent from them, viz., claims 2 – 13 and 63, 15 – 20, 22 – 38, and 40, are allowable over Brodie, Davis et al. and Liu, whether taken singly or in any combination desired; and,

2) claims 1, 14, 21 and 39 now constitute allowable generic or linking claims, and pursuant to MPEP 809.04, that the claims respectively dependent from them and previously withdrawn from consideration (6, 8, 9, 17, 19 and 20) should be rejoined to the application, examined for patentability under 37 CFR 1.104 and held allowable.

In Section 57 of the Office action, the Examiner objected to claims 2-3, 5, 22, 25, 27-29, 35, and 37-38 as being dependent upon a rejected base claim, but indicated that they would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims, for which the Applicant expresses appreciation. However, in light of the above remarks, it is respectfully submitted that all pending claims (1-40 and 58-63) are now allowable over the art of record, and Applicant therefore respectfully requests that a timely Notice of Allowance be issued in this case.

If there are any questions regarding the above, the Examiner is respectfully invited to call the undersigned at (831) 458-7758.

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| I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below. | |
|  Michael Rodriguez | April 18, 2006 Date of Signature |

Respectfully submitted,

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Reg. No. 53,528